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- **Ieda, Norikazu**  
**Mizuho-ku**  
**Nagoya-shi**  
**Aichi (JP)**
- **Tanaka, Mashiro**  
**Mizuho-ku**  
**Nagoya-shi**  
**Aichi (JP)**
- **Inagaki, Hiroshi**  
**Mizuho-ku**  
**Nagoya-shi**  
**Aichi (JP)**

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(71) Applicant: **NGK SPARK PLUG CO., LTD**  
**Mizuho-ku**  
**Nagoya-shi**  
**Aichi (JP)**

(74) Representative: **Zimmermann, Gerd Heinrich et al**  
**Zimmermann & Partner**  
**Postfach 330 920**  
**80069 München (DE)**

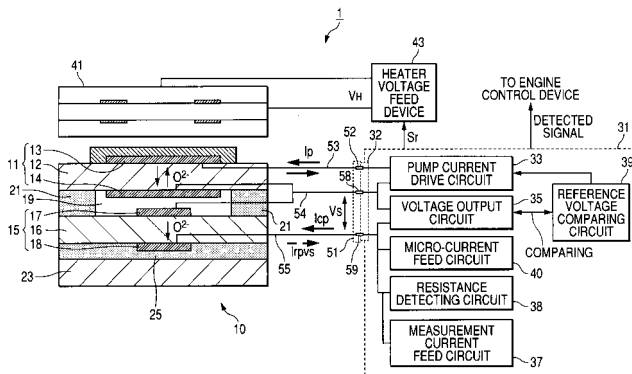
(72) Inventors:  
• **Inoue, Yoshinori**  
**Mizuho-ku**  
**Nagoya-shi**  
**Aichi (JP)**

(54) **Gas detecting system**

(57) A gas detecting system comprises: a sensor element including: an oxygen pump cell comprising a first oxygen ion conducting solid electrolyte layer between a first pair of electrodes; an oxygen concentration measuring cell comprising a second oxygen ion conducting solid electrolyte layer between a second pair of electrodes; and a measurement chamber between the oxygen pump cell and the oxygen concentration measure-

ment cell; a plurality of lead wires connected with the first and second pairs of electrodes; and a control unit electrically connected with the electrodes through the lead wires, wherein the lead wires includes a common lead wire connected with electrodes confronting the measurement chamber of the first and second pairs of electrodes, and wherein the common lead wire has a portion to contact in an electrically insulated state with at least one of the lead wires other than the common lead wire.

**FIG. 1**



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EUROPEAN SEARCH REPORT

Application Number  
EP 05 00 1711

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	EP 0 841 562 A2 (NGK SPARK PLUG CO [JP]) 13 May 1998 (1998-05-13) * claims 4,7 * * figure 1 * * column 18, lines 45-50 * -----	1-5	INV. G01N27/407
Y	EP 0 851 108 A2 (DENSO CORP [JP]) 1 July 1998 (1998-07-01) * column 4, lines 36-47 * * column 5, lines 31-55 * * column 7, lines 6-8 * * figure 2 * -----	6-8	
Y	EP 1 257 008 A2 (NEXANS [FR]) 13 November 2002 (2002-11-13) * paragraphs [0011], [0014] * * figure 2 * -----	1-8	
Y	DE 195 23 911 A1 (BOSCH GMBH ROBERT [DE]) 2 January 1997 (1997-01-02) * column 2, lines 25-39 * * figure 1 * -----	1-3,7	
Y	US 4 556 475 A (BAYHA KURT [DE] ET AL) 3 December 1985 (1985-12-03) * column 4, lines 39-48 * * figure 1 * -----	1-3,7	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			G01N
3	Place of search The Hague	Date of completion of the search 17 December 2009	Examiner Couteau, Olivier
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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Application Number

EP 05 00 1711

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5

Common lead wire  
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2. claims: 6-8

Resistance detecting unit  
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ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 05 00 1711

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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17-12-2009

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